

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Revision of Part 15 of the Commission's)	
Rules to Permit Unlicensed National)	ET Docket No. 13-49
Information Infrastructure (U-NII) Devices)	
in the 5 GHz Band)	

To: The Commission

COMMENTS OF SPITwSPOTS, INC.

SPITwSPOTS, Inc. ("SPITwSPOTS"), pursuant to Sections 1.415 and 1.419 of the rules of the Federal Communications Commission ("FCC"), hereby submits Comments in response to the Notice of Proposed Rulemaking seeking comment on proposed amendments to Part 15 of the FCC's rules.¹ SPITwSPOTS is a fixed broadband service provider with coverage areas in and around Homer, Alaska and in extremely rural parts of the state. SPITwSPOTS makes extensive use of Part 15 devices that operates using frequencies at 5470-5825 MHz. SPITwSPOTS urges the Commission to avoid adopting rules affecting devices that would strand the extensive investment that SPITwSPOTS has made deploying in wireless infrastructure in the 5470-5825 MHz bands that is used to provide valuable broadband services to consumers in remote parts of Alaska.

¹ *Revision of Part 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band*, Notice of Proposed Rulemaking, FCC 13-22, ET Docket No. 13-49 (rel. Feb. 20, 2013).

Background

SPITwSPOTS provides fixed wireless Internet access services to approximately 900 customers within the Kenai Peninsula Borough in Alaska. These customers represent approximately 10-14 percent of the households in Homer and 17 percent of the households within SPITwSPOTS' wireless network. SPITwSPOTS provides broadband services funded solely through private investment, not through subsidies from the federal government. SPITwSPOTS operates a network that makes extensive use of equipment that uses Part 15 unlicensed frequencies in the 5470-5825 MHz band.

The *NPRM* proposes to amend Part 15 of the FCC's rules to make an additional 195 MHz of spectrum available in the 5350-5470 MHz and 5850-5925 MHz bands for use by Unlicensed National Information Infrastructure ("U-NII") devices. Like many other wireless Internet service providers ("WISPs"), SPITwSPOTS uses U-NII devices for outdoor fixed antenna installations. One particular proposal in the *NPRM*, if adopted, would make it much more challenging for SPITwSPOTS to provide this service.

Specifically the *NPRM* proposes to harmonize two different sets of Part 15 rules that apply to indoor-outdoor operations of devices in the 5250-5825 MHz band.

- The existing UNII-3 rules at Section 15.407 limit the maximum conducted output power to the lesser of 1 watt or $17 \text{ dBm} + 10 \log B$, where B is the 26-dB emission bandwidth in MHz.² These rules also establish a maximum EIRP (with 6 dBi antenna) of 36 dBm/ 4 watts, with a 53 dBm/200 watt limit for point-to-point operations.³ The operator is required to reduce power when the antenna gain exceeds 6 dBi, or when the antenna gain exceeds 23 dBi for point-to-point operations.⁴
- The existing rules at Section 15.247 limit the maximum transmit power to 1 watt.⁵ These rules also establish a maximum EIRP (with 6 dBi antenna) of 36 dBm/ 4 watts,

² 47 C.F.R. §15.407(a)(3).

³ *NPRM* at Appendix C.

⁴ 47 C.F.R. §15.407(a)(3). For fixed, point-to-point UNII transmitters that employ a directional gain greater than 23 dBi, a 1 dB reduction in peak transmitter power and peak power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.

⁵ 47 C.F.R. §15.247(b)(4)(1), (3).

but there is no maximum power limit for point-to-point operations.⁶ The operator is required to reduce power when the antenna gain exceeds 6 dBi, but there is no corresponding limit or required power reduction for point-to-point operations.⁷

The *NPRM* states that the FCC is “proposing to align the provisions for operation of digitally modulated devices in the 5.725-5.85 GHz band, now permitted under Section 15.247 of our rules, with the rules for the U-NII-3 band under Section 15.407. This will expand the U-NII-3 band by 25 megahertz and provide consistent rules across 125 megahertz of spectrum.”⁸ In addition, the *NPRM* proposes a variety of changes to the technical parameters to the rules in 5 GHz bands and seeks comment on making available an additional 195 megahertz of spectrum available for U-NII use in the 5.35-5.47 GHz and the 5.85-5.925 GHz bands.

The FCC should adopt its proposal to extend the UNII-3 band by 25 MHz, but should retain the Section 15.247 technical rules

In general, SPITwSPOTS supports the Commission’s move to make more unlicensed spectrum available for use by operators such as WISPs. SPITwSPOTS supports the FCC’s proposal to add 25 megahertz to the upper edge of the U-NII-3 band to correspond with the 5725-5850 MHz band currently licensed under Section 15.247. By adding additional authorized frequencies for unlicensed U-NII operations, the rule change would enhance the availability of spectrum capacity for WISPs and others seeking to provide service, particularly in rural areas. Given the differences in technical characteristics between the Section 15.247 and the Section 15.407 rules, limited harmonization of the covered frequencies should help spur innovation and investment while simultaneously helping operators manage conflicting technical limits that apply to different types of equipment that operate in the same frequencies under different rules.

⁶ *NPRM* at Appendix C.

⁷ 47 C.F.R. §15.247(b)(4)(ii).

⁸ *NPRM* at ¶¶20, 27.

While SPITwSPOTS will leave to others to weigh in on specific technical characteristics, one change proposed in the *NPRM* could cause significant harm to the company and to its subscribers. SPITwSPOTS has deployed long-range point-to-point backhaul systems that use more than 20 point-to-point links to serve several hundred devices, and these systems use highly directional antennas at power levels permitted under Section 15.247. Harmonizing the 5725-5850 MHz rules to the limits in Section 15.407 would make it impossible to continue operating these long-range links, thereby stranding the company's investment. Many of these long-distance links, by necessity, serve rural areas with low population densities in isolated areas. They provide WISPs like SPITwSPOTS with cost-effective deployment options to serve areas where available revenues are inadequate to support the cost of deployment and might not otherwise make service to those areas feasible.

With these considerations in mind, SPITwSPOTS urges the Commission to retain the Section 15.247 technical and operating rules applicable to point-to-point operations at 5725-5850 MHz band. The benefits of harmonizing the rules for the spectrum should not come at the cost of nullifying the benefit of equipment that SPITwSPOTS and other WISPs have successfully deployed to rural areas that might otherwise not be served. In light of the FCC's push to expand broadband availability through a variety of initiatives, many of which target high-cost rural areas, these proposed rule changes reflect the proverbial "two steps back" to the "one step forward" of modernizing USF programs for broadband deployment.⁹ Accordingly, the FCC should reject the proposal.

⁹ See generally *Connect America Fund; A National Broadband Plan for Our Future; Establishing Just and Reasonable Rates for Local Exchange Carriers; High-Cost Universal Service Support; Developing an Unified Intercarrier Compensation Regime; Federal-State Joint Board on Universal Service; Lifeline and Link-Up; and Universal Service Reform – Mobility Fund*, Report and Order and Further Notice of Proposed Rulemaking, WC Docket Nos. 10-90, *et al.*, FCC 11-161 (rel. Nov. 18, 2011), *pets. for review pending sub nom. In re: FCC 11-161*, No. 11-9900 (10th Cir. filed Dec. 8, 2011) ("*USF/ICC Transformation Order*").

In the alternative, SPITwSPOTS supports the proposal to grandfather “U-NII devices that are already installed or in use”¹⁰ provided that the grandfather status expressly includes equipment that is certified via Section 15.247 in addition to, and to the same extent as, equipment certified under the U-NII rules. As noted above, SPITwSPOTS has a large number of these devices deployed, and requiring immediate replacement would be financially burdensome. In light of the replacement cycle of existing devices and the valuable services being provided, grandfathering such devices for an indefinite period is appropriate.

Conclusion

SPITwSPOTS requests that the FCC adopt the proposals referenced in these Comments to retain the existing technical rules under Section 15.247 for the 5725-5850 MHz band for use in fixed point-to-point outdoor operations.

Respectfully submitted,

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SPITwSPOTS, Inc.

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¹⁰ *NPRM* at ¶115.